

**EIA VACCINE AND DIAGNOSTIC**

**ABSTRACT OF THE DISCLOSURE**

The invention provides an equine infectious anemia (EIA) vaccine and/or construct that provides immunity to mammals, especially equines, from infection with equine infectious anemia virus (EIAV) and which, in embodiments, allows differentiation between vaccinated and non-vaccinated, but exposed, mammals or equines. In various embodiments, said vaccine encompasses at least one mutation in an EIAV which produces a non-functional gene in the vaccine virus that is always expressed in disease-producing wild-type EIA viruses. Additionally, said EIA vaccine virus cannot cause clinical disease in mammals or spread or shed to other mammals including equines.